

Characteristics of Winning Title II-D Edtech Grant Proposals

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Abstract

As part of the No Child Left Behind Act (NCLB), the U. S. Department of Education determined that state education agencies could submit a consolidated application to obtain funds from many federal programs through a single, consolidated application. Title II-D Enhancing Education through Technology (EdTech), is one of thirteen programs that could be included in the consolidated application in Georgia. Research questions addressed which districts got funded and whether wealth or district enrollment impacted the outcome of the funding decision. Results showed that district enrollment (but not wealth) was associated with the funding decisions. Large school districts were significantly more likely to have their proposals funded. The process designed by the Title II-D competition to promote accountability increased the already overworked district level employee in small districts.

Characteristics of Winning Title II-D Edtech Grant Proposals

The formula for funding the nation's educational programs was changed when the No Child Left Behind Act (NCLB) became law in January, 2002. Changes included in NCLB were intended to promote stronger accountability, to increase local control, and to simplify the educational funding process.

The Elementary and Secondary Education Act of 1965 addressed the special educational needs of low-income families and assisted local education agencies (LEAs, or school districts) with providing assistance to disadvantaged students. Title I has been the most widely recognized element of the Elementary and Secondary Education Act (ESEA). Title I, Part A, provides extra funds to high-poverty schools to help improve instruction and to ensure that poor and minority students have the same opportunity that other students have to meet the challenges of high academic standards (Boehner and Gregg, 2002).

On January 8, 2002, President George W. Bush signed into law the No Child Left Behind Act (NCLB), reauthorizing ESEA and expanding the flexibility of the Improving America's Schools Act of 1994. Designed to "ensure that no child will be trapped in a failing school," NCLB modified the four principles identified in the Improving America's Schools Act of 1994 to: 1) promote stronger accountability for results, 2) increase flexibility and local control, 3) expand options for parents, and 4) emphasize teaching methods that have been proven to work (USDOE, 2002b). As part of NCLB, the United States Department of Education (USDOE) determined that state education agencies could submit a consolidated application to obtain funds from many federal programs through a single application, (USDOE, 2002a).

The Georgia Department of Education (GADOE) monitored Local Consolidated Applications for quality by using one set of procedures, selection criteria, and priorities to award formula and discretionary (competitive) grants for all programs under the ESEA (GADOE, 2003). Rubrics, developed by the GADOE, were used to link the required professional development component to school improvement needs in the system. Specific content areas identified by school districts (LEAs) guided the focus of local efforts.

Title II-D Enhancing Education through Technology (EdTech), is one of thirteen programs that could be included in the consolidated application. In Georgia, the GADOE technology office directs Title II-D programs. The goal of Georgia's educational technology grant program is to increase achievement in an identified core academic area and in specified technology literacy standards of the Georgia Quality Core Curriculum. Key program requirements include: program goals, indicators, objectives, and data sources to be used by the state to assess the effectiveness of the program in improving access to and use of educational technology by students and teachers.

In its first year of competitive process, Georgia school districts completing the consolidated application and eligible districts for the Title II-D competitive grants were

allowed to submit a proposal for funds to support the integration of technology. Each school district applying for an EdTech grant identified specific goals as the central focus of EdTech activities to assure that the state's goal was met.

EdTech Title II-D goals

Professional development activities were a critical component of the EdTech Title II grant process. A thorough understanding of effective professional development goals, strategies, and pedagogical changes were supposed to guide the development of grant activities, as well as the quality professional development.

In a discussion of effective professional development in a technological age, Grant (n.d.) proposed that the goal of professional development for technology should be to help teachers become more productive professionals, and to empower them to make sense of how mastery of technology can be useful to them in their teaching and for professional growth. Guskey (1998) contended that the critical goal of professional learning for effective technology use was to improve student achievement. Setting and adhering to specific measures where both teachers and students meet the measure of accountability could achieve this goal.

The human capital districts must expend to write credible proposals in order to win competitive grants

The EdTech grants were federal money passed through to the states. The states set their goals based on the federal legislation. Haas (2000) noted

State discretionary grants are usually made in response to proposals, but small schools seldom get their fair share of these funds. The application process can be burdensome, particularly when people are stretched across multiple responsibilities. Small schools may not have the insight or skills to produce polished, focused proposals. (¶20)

The issue that people are stretched across multiple responsibilities may be a critical factor in determining whether a school or a district can free *at least* one person up for a sufficient number of hours to write a competitive proposal. Winning competitive federal grants requires a considerable upfront investment of professional time and energy, and it may be harder for small schools districts free up a sufficient amount of an employee's professional time to write a credible response to a federal initiative.

One potential source of grant writers might be teachers; however, school districts may not see or use teachers as human capital for grant development. Monahan (1992) found that 47% of responding teachers reported they were never engaged in grant-seeking or grant-writing activities and 23% were rarely involved. Monahan also found that districts provided no release time or support staff for teachers involved in grant activities. The amount of professional time needed to develop a response to a federal initiative may be prohibitive for a person who is expected to maintain her/his teaching responsibilities.

District employees are another potential source of grant writers since district employees can immerse themselves in grant writing, focusing nearly 100% of their time in the days before a proposal deadline to; get approvals and letters of support, agreements within an outside the school district, write the proposal and get it sent off. As Haas (2000) points out, in small districts, employees wear many different hats and cover multiple responsibilities. A district employee with 1/3 of her time professional time in curriculum, technology and nutrition might find it harder to be able to immerse herself in a grant writing project because no other person can credibly cover for this employee if problems or issues come up in areas typically under their job description when they are trying to finish a grant under a real deadline. A district employee in a larger district may have 100% of her professional time in curriculum, and work with one (or more) additional curriculum directors or supervisors. Immediate work related problems can be off-loaded to colleagues, making it easier to facilitate immersion in short-term intensive tasks like preparing federal competitive grants.

Wealth of a school district and the likelihood of winning competitive federal grants

Wealth of a school district could be another factor influencing the likelihood of winning competitive federal grants. By paying higher salaries, school districts can attract and keep desired employees. But salaries are only one piece of the equation in hiring and retaining quality employees. Theobald (1990) found that property wealth was *negatively* related to teacher retention, but retention was positively related to teacher experience and district enrollment. The higher the district enrollment, the greater the likelihood an employee was to stay in the same system.

Wealthy districts are not only able to hire desired employees, but able to retain such employees, critical for insuring some level of grant writing experience for the system. There is a learning curve in preparing competitive federal grants. The first grant will be difficult for most grant writers, and filling out the federal forms (budget, title, among others) will be especially burdensome. The second and third attempts to win competitive federal grants should be easier, but a district must be able to retain employees to get the benefits of this learning curve. Turnover is greater in smaller districts (Theobald, 1990) putting those districts at a disadvantage on the experience factor.

Unique Challenges Facing Small, Rural School Districts

Small school districts can be found throughout the United States, in urban, suburban and rural environments, but are most prevalent on a percentage basis in rural areas. Small rural school districts face unique challenges as they attempt to provide quality education for their students. Personnel issues present major problems in completing the bureaucratic requirements of collecting and reporting data and disseminating information to teachers. Student enrollment is the basis for funding

provided by the State of Georgia, and in small districts, the earned funds do not provide for adequate personnel to perform the extensive duties required of district employees.

Administrators of small rural districts reported that district staff was required to assume multiple roles limiting the amount of time they had to collect and disseminate information needed by teachers to impact student performance and to provide professional development (U. S. Government Accountability Office, 2004). The ability to release personnel to attend conferences and receive training was also a problem because of small staffing size. (U. S. Government Accountability Office). Arnold, Newman, Gaddy and Dean, (2005) found that although staff size is smaller in rural schools, they are required to implement policy initiatives that were developed to meet the needs of urban and suburban schools that are administered by large staffs. Federal and state agencies have recognized that funding problems exist and are working to alleviate them (U. S. Government Accountability Office).

Small districts comprise 42% of all schools in the United States and represent 30% of the student population (USDOE, 2002c). Federal and state agencies have recognized that funding issues exist between large and small districts and are working to alleviate them. In 2004, the Government Accountability Office (GAO) issued a report stating that small rural school systems face unique challenges not faced by larger systems when trying to implement the No Child Left Behind (NCLB) legislation. One half of small rural district administrators responding to survey questions stated that district size was a factor affecting their ability to implement NCLB compared to just one quarter of officials in larger rural districts. The report stated that small districts would benefit from further assistance in providing teacher development opportunities to meet the requirement of highly qualified teachers and in identifying effective remedial services that must precede improvements in student achievement.

In Georgia, local districts earn district level staff based on student enrollment. All 180 school districts receive funding (at a base salary) for a full time superintendent paid for by the State of Georgia. Districts can supplement the base pay of a superintendent and most provide additional compensation. In addition to the full time superintendent, districts having 3,300 students or more earn a full-time curriculum director, a visiting teacher/social worker, and a nutrition program director paid for by the State of Georgia. Districts with 200 or more special education FTE earn a full time special education director paid for by the State. Small districts (defined by the State of Georgia as those with less than 3,300 students), however, earn a half-time curriculum director, a part-time visiting teacher/social worker, and a part-time nutrition program director paid for by the State. Districts with less than 200 special education FTE earn one-fourth (of a) position for each 50 special education FTE up to 200 special education students (GABOE, 2000).

Larger districts are required to have additional district employees, and economies of size become pertinent. Districts over 3,300 students are required to have a full time curriculum director. The State of Georgia *requires* an additional curriculum director (or supervisor) for every 4,125 students in a school district over and above the 3,300 base figure. Therefore a district with 7,400 students would have at least two full time

curriculum directors, and a district with 11,500 would have at least three. Overall, the number of district employees can vary considerably from a very low number (less than 2.0) in districts under one thousand students to much larger numbers in districts like Atlanta Public Schools with over 50,000 students.

Hypotheses for this study were:

H₁: Proposals submitted by non-poor school districts will be more likely to be funded than proposals submitted by poor school districts.

H₂: Proposals submitted by districts with large enrollments (greater than 3300) will be more likely to be funded than proposals submitted districts with small enrollments (less than 3300).

Methods

In this study, we used quantitative techniques to determine if differences existed between funded and non-funded grant proposals competing for the 2003 Georgia Department of Education Title IID EdTech monies and a content analysis of the proposals to provide additional information regarding the strengths and weaknesses of funded and unfunded proposals. The population for this study included the 122 eligible school districts (out of 180) that could have applied for EdTech monies. The 58 wealthiest school districts (32% of the statewide total) were not eligible to compete for these funds and thus were not included in the study. The elimination of the wealthiest districts was the reason for the comparison of the poor and non-poor districts in the first hypothesis. One hundred school districts submitted proposals for this EdTech competition out of the 122 eligible districts. Seventy-four proposals were funded and 26 were not funded.

The population for the research questions regarding wealth of district and the student enrollment included the population of 122 eligible districts and a sub-analysis of the 100 districts submitting proposals, allowing the researchers to determine if those districts choosing not to submit a proposal were similar in wealth and enrollment to districts competing for the EdTech funds.

Data from the Georgia Board of Education were used to provide wealth (GABOE, 2000) and enrollment (GABOE, 2005) on the 122 districts eligible to submit proposals. Additionally, each of these 122 districts was classified into one of the following three categories based on outcome of their grant; funded, not funded, or did not apply. A chi-square test of statistical significance was run to determine if wealth and enrollment had an impact on whether a grant was awarded or not.

In order to rule out the possibility that the results reported in the cross tabulation tables were an artifact of using the State of Georgia's 3,300 figure as the cut point to determine small and large districts (http://www.doe.k12.ga.us/_documents/doe/legalservices/160-5-1-.22.pdf), and the

median to determine districts that spent more (or less) local dollars on schools, a non-parametric statistic, Spearman's rank order correlation related dollars spent and district enrollment as continuous variables to the grant outcome variable (successful or unsuccessful) for the 100 districts that applied for EdTech funding.

A multivariate model was estimated to determine if the effects of district enrollment on the likelihood of winning a grant, controlling for the amount of local dollars spent on education, and the effects of local dollars spent on education controlling for district enrollment. Both district enrollment and local dollars were continuous variables in this analysis, predicting to the discrete grant outcome variable (successful or unsuccessful). A dichotomous logit model estimated these relationships (Huck, 2004). Since we had the population of interest (all EdTech proposals in the State of Georgia in a given year), statistical significance is reported in the tables for the convenience of the reader.

Lastly, a content analysis was undertaken to compare the top funded and top non-funded proposals on the 46 elements that were used by the peer reviewers to judge the merits of each proposal.

Results

Hypothesis 1 Wealth

In order to estimate a relationship to assess hypothesis one, all 122 eligible districts were ranked as non-poor or poor using data obtained from the *Equalization Wealth and Ranking System* (GABOE, 2000). The districts were divided into two groups and the district with the median measure of wealth was used as the separation point for non-poor and poor. Outliers skewed the distribution, prompting the decision to use the median as the cut point to measure wealth. To answer question one, "proposals submitted by non-poor school districts will be more likely to be funded than proposals submitted by poor school districts," a chi-square test result revealed that wealth of a system had a small impact on whether a system received a grant or not, as shown in Table 1. We found that 68% of the districts that spent a greater amount of local dollars on education wrote successful proposals, compared to 53% of the districts spending less local dollars. Districts spending more local dollars were more likely to have their proposals funded, but the 15% difference was not statistically significant. Additionally, we found a similar percentage of districts classified as poor and not poor not applying for funding. Therefore, the null hypotheses, proposals submitted by poor school systems were more likely to be funded than proposals submitted by non-poor school systems was not rejected ($\chi^2 = 3.5$, $df = 2$, ns). The effect size, w , equaled .11, a small effect size per Cohen (1988).

Table 1
Grant Outcome Based on Wealth of School District Including Districts that Did Not Apply

Grant outcome * wealth of school district Crosstabulation

			wealth of school district		Total
			not poor	poor	
Grant outcome	funded	Count	41	33	74
		% within wealth of school district	68.3%	53.2%	60.7%
	not funded	Count	9	17	26
		% within wealth of school district	15.0%	27.4%	21.3%
	did not apply	Count	10	12	22
		% within wealth of school district	16.7%	19.4%	18.0%
Total	Count	60	62	122	
	% within wealth of school district	100.0%	100.0%	100.0%	

Hypothesis 2 District enrollment

Hypothesis 2 postulated, “Proposals submitted by districts with large enrollments will be more likely to be funded than proposals submitted districts with small enrollments.” To answer this question, all districts were ranked in terms of size, (1 being largest) using Full Time Equivalency (FTE) student data obtained from the GADOE (2005).

Chi-square results displayed in Table 2 showed that 75% of districts with larger enrollments were funded while only 49% of districts with smaller enrollments were funded. About 30% of districts with small enrollments were not funded compared to only 11% of districts with larger enrollments. The remaining 14% of eligible large enrollment districts and 21% of eligible small enrollment districts did not apply. A chi-square test established that these differences were statistically significant ($\chi^2=9.77$, $df=2$, $p<.01$). The effect size, w , equaled 0.28, was considered small by Cohen’s (1988) criterion. Therefore the null hypothesis was rejected and the inference made that proposals submitted by large school districts were more likely to be funded than proposals submitted by small school districts.

Table 2

Grant Outcome Based on School District Enrollment, Including Districts that did not Apply for the Grant

Grant outcome * Size of school district Crosstabulation					
			Size of school district		Total
			small	large	
Grant outcome	funded	Count	32	42	74
		% within Size of school district	48.5%	75.0%	60.7%
	not funded	Count	20	6	26
		% within Size of school district	30.3%	10.7%	21.3%
	did not apply	Count	14	8	22
		% within Size of school district	21.2%	14.3%	18.0%
Total	Count	66	56	122	
	% within Size of school district	100.0%	100.0%	100.0%	

Analyzing wealth and size of district enrollment as continuous variables

Treating wealth and size of district enrollment as continuous variables predicting to the discrete grant outcome variable (funded, not funded) did not appreciably alter the substantive conclusion reached with the chi-square analysis using dichotomous variables. Given the ordered nature of the dependent variable (funded or not funded), the Spearman's rank order correlation was used to estimate these relationships. The results followed the same pattern reported in the cross tabulation tables. Local dollars spent was positively but not significantly related to likelihood of winning a grant ($\rho=.12$, ns) and district enrollment was positively and significantly related to the likelihood of winning a grant ($\rho=.29$, $p<.01$).

Table 3 presents the results of a multivariate model between local dollars spent, district enrollment and the likelihood of winning a Title II D EdTech grant.

Table 3
Local Dollars Spent, District Enrollment, and Likelihood of Writing a Winning Grant Proposal

	B	S.E.	df	Sig.
Local dollars	.290	.278	1	.297
District enrollment	.240	.121	1	.047
Constant	-.409	.646	1	.527

Results showed that district enrollment was significantly related to the likelihood of winning a grant, controlling for local dollars but local dollars spent was not significantly related to the likelihood of winning a grant, controlling for district enrollment. There was no additional effect on the likelihood of winning EdTech grants for districts that were both small and poor. Districts that were both small and poor had almost the same likelihood of winning an EdTech grant as a district that was small. In other words, there was no interaction effect between small districts and poor districts on the likelihood of winning EdTech grants in this study.

Elements of the EdTech proposals where funded and not funded proposals differed

The content analysis showed that the top funded proposals were consistently scored higher than the proposals that were top not funded. Eleven indicators showed statistical significance using the conventional $\alpha=.05$ criterion, as shown in Table 4. Table 4 also shows that all funded proposals on the 11 indicators scored a perfect 3.0, attaining the highest possible score on each indicator. Top not funded proposals were judged significantly weaker than top funded proposals by peer reviewers on 11 elements shown in Table 4.

Table 4
Eleven Significantly Different Elements

Item	Mean for Top Funded proposals	Mean for Top Non-funded proposals	t-value	P <.05
D6 Data Collection	3.0	2.4	2.449	.05
D7 Data Management	3.0	1.8	3.207	.05
E5 Budget Narrative	3.0	2.4	2.449	.05
F1 Strategies Supported by Research	3.0	1.6	5.715	.05
F3 Aligned to National Policy	3.0	2.2	4.000	.05
F4 Improvement of Essential Conditions	3.0	1.4	6.532	.05
F5 Improvement in Student Achievement	3.0	1.0	4.472	.05
F6 Rationale	3.0	1.4	4.000	.05
H1 Partnership Description	3.0	1.8	3.207	.05
H4 Evidence of Partnership	3.0	1.2	3.087	.05
I 7 Using Data to Gauge Progress	3.0	1.8	2.449	.05

Discussion

This research focused on determining specific ways of assisting school districts writing successful, funded Title IID Edtech proposals.

Hypothesis 1 showed that wealth of a school district had a small, but statistically insignificant impact on the likelihood of a district winning an EdTech grant. There are a number of possible explanations for the small effect to do wealth. (1) We compared the districts in the middle of the wealth continuum with those on the bottom. The 58 wealthiest school districts (32% of the total) in the State of Georgia were not eligible to compete for EdTech funds and thus were not a part of this study. In statistical parlance, we had a truncated range of variation for wealth when the 58 richest districts were not included in the study. Perhaps looking at the wealth indicator when all 180 Georgia school districts were eligible to compete for funding would have shown support for the notion that wealthy districts were more likely to develop successful proposals. (2) Wealthy districts may have more human capital than districts less wealthy, but less wealthy districts may have had sufficient human capital to prepare competitive proposals for this competition. Any additional human capital found in wealthy districts may not have been needed for the EdTech grants, where 74% of the submitted proposals were successful. In a more competitive funding competition, where the percentage of winning proposals can be less than 10%, wealth of a district may be a more important factor.

Hypothesis 2 results showed that small districts were significantly less likely to be funded than larger systems in this competition. Small school districts were successful more often than not in this competition; the success rate for small districts was 61%. However, 87% of proposals from large districts were successful, a 26% difference. Thus, this study finds support for Haas' (2000) observations that small schools and districts have structural barriers which make winning competitive grants difficult, particularly when people are stretched across multiple responsibilities. This finding may indicate that small districts need additional assistance in writing Edtech proposals, or some accommodations should be considered to help out smaller districts.

Small districts do not have sufficient monies to fund district level positions generally assigned the responsibility of developing and writing grant proposals, especially federal proposals. Whether the district was large or small, the same expectations were required of all proposals, putting small districts at a competitive disadvantage with the current consolidated application process. The result would be similar to a requirement from the Internal Revenue Service requiring all taxpayers, irrespective of earned income, to fill out a 1040 tax form, plus itemizing deductions, doing away with the 1040A and 1040EZ and the standard deduction for people who don't need and won't benefit from completing the more labor intensive and complicated forms.

Small districts, unable to afford the luxury of having full time; media specialists, curriculum directors, school social workers, nutrition program directors, and special education directors usually have central office personnel with multiple job titles and responsibilities. As a result, district level personnel in smaller districts may be required to wear many hats. For example, an assistant superintendent may be responsible for curriculum and technology programs. The addition of the competitive grant component of the Title II-D process created another cumbersome task for an already overworked district level employee in smaller districts. Thus, the consolidated application process designed to promote accountability and increase local control appeared to be further distancing these smaller districts from their larger peers.

The content analysis highlighted some of the shortfalls in the non-funded proposals. Not surprisingly, the top funded proposals scored higher than the top non-funded proposals. Looking at the particular elements where top funded and top non-funded proposals differed in scoring highlighted some common and potentially easily correctable deficiencies in the proposals that were not successful. The elements rationale, partnership description, evidence of partnership, strategies supported by research and perhaps some of the others required proposal writers to conduct literature review, document agreements between participants and provide an overview of the need of the project. The top non-funded proposals did not provide evidence or document these issues well according to the judgments of the peer reviewers. These elements (rationale, partnership description, evidence of partnership, strategies supported by research) take some professional time to deal with (conducting a literature review to link the proposed grant strategies to prior research, getting agreements between other players to provide evidence of partnership). It appears that the non funded proposals lacked appropriate evidence on these elements. Completing responses to these elements is not difficult if the proposal writer has sufficient professional time to develop a credible response.

Recommendations

The State of Georgia and the U.S. Department of Education should consider if all school districts (large and small) should be held to the same standards and expectations when submitting competitive grants like EdTech. It appears from this analysis that small districts were put at a competitive disadvantage when contrasted to their larger peers and it was more difficult for small districts to achieve the standards and expectations set by the funding proposal.

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